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## Nebraska 4-H Sheep Manual : Extension Circular 2-71-2

W. A. Buchanan

et al.

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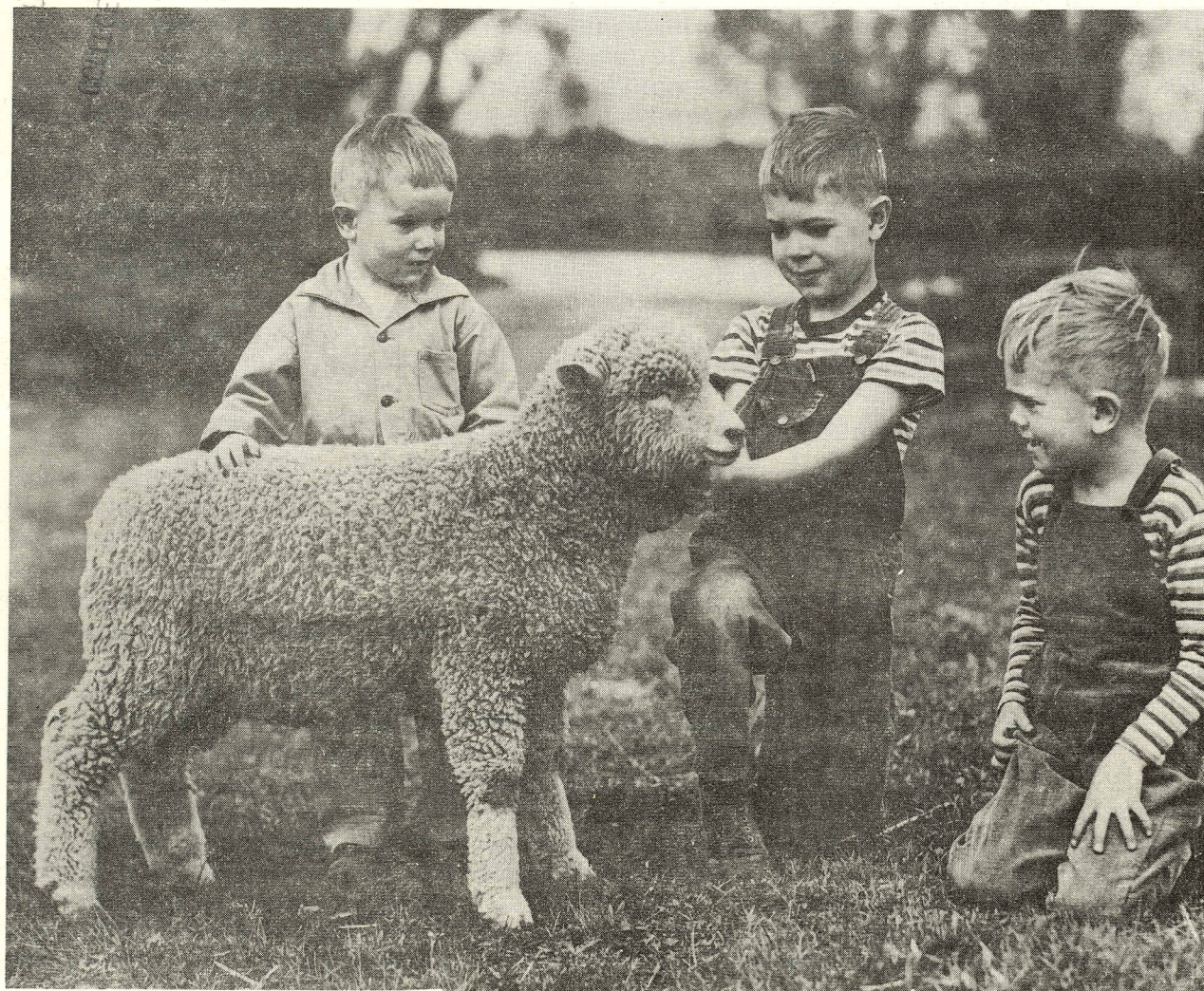
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E.C. 2-71-2  
November 1954

E.C. 2-71-2

# Nebraska 4-H SHEEP MANUAL



## Starting Early

EXTENSION SERVICE  
UNIVERSITY OF NEBRASKA COLLEGE OF AGRICULTURE  
AND U.S. DEPARTMENT OF AGRICULTURE  
COOPERATING  
W. V. LAMBERT, DIRECTOR



## Several Choices for Beginners

Before you study the different chapters of this manual, and preferably before you get any sheep for a 4-H project, think about these different possibilities:

1. You can buy three or more January lambs about the end of April, feed them 90 to 120 days, fit and show them at the 4-H Fairs in August and September, and sell them as market lambs at the end of one of the fairs. This will give you enjoyable 4-H club experience and a chance to learn a lot about sheep. Since this season does not fit in very well with the most practical sheep flock management, you may have to buy the lambs high and sell them on the low lamb market of the year.

2. You can start with bred yearling ewes in the fall, lamb them out early, and force feed the lambs for the early spring market which is usually the high time of the year. Consideration might also be given to exhibiting at the annual lamb and wool show in June. If you know enough about sheep, your chances for profit from both wool and lambs should be better than in the market lamb project.

3. You can buy sixteen or more western lambs when they come to market in the fall, use up some farm roughage, feed them some grain, and sell them as fat lambs in the winter or spring.

### CONTENTS

Interesting Characteristics of Sheep . . . . .	3
Suggestions for Inexperienced Beginners . . . . .	3
Common Terms, Parts of Sheep, Breeds, Age . . . . .	4
Equipment . . . . .	7
Feeds for Sheep . . . . .	8
Ailments of Sheep . . . . .	10
The Market Lamb Project . . . . .	11
The Ewe and Lamb Project . . . . .	11
Fitting and Showing . . . . .	15

This manual was prepared by W. A. Buchanan, former county extension agent of Antelope County, and the staff of the Extension Service.



## 4-H SHEEP MANUAL

### Interesting Characteristics of Sheep

There is something about the nature and habits of sheep and lambs that interests and attracts 4-H club members. It may be because sheep are more docile and easier to manage than most other classes of livestock. The antics of young spring lambs on a bright, sunny, frosty day may have a special appeal to boys and girls. They enjoy watching young lambs as they run and play and jump stiff legged or climb on top of any object such as a bale of hay, a tree stump, or a large rock or stand or curl up and lie down on the mother ewe while she is lying down peacefully chewing her cud.

Sheep are timid. They are not like other classes of farm animals with young pigs, calves or colts by their side. They just simply do not possess the determination to defend themselves or their young in any really protective manner. The more aggressive ram or ewe may vigorously stamp the front feet while facing some stranger or a stray cat or dog. The horned sheep breeds are more aggressive in this respect than the hornless breeds. They will stand their ground better and not become as easily stampeded.

It is a characteristic of sheep when frightened to follow any sheep that starts to break away from the flock, and before you know it the entire flock is on the run to get away from the area where they became scared. This trait tends to tempt stray dogs to run them and, when some one sheep or lamb is winded, to pounce on it, and a sheep is lost. When badly frightened and chased by a dog, sheep will run until they are exhausted and have no reserve strength left to resist attack.

Some short bodied sheep may have fewer vertebrae in their spinal column than the average long bodied sheep. Short bodied sheep have a stronger back than those with long bodies and their general appearance is much more attractive to the eye.

Sheep are ruminants. They chew their cud like cattle. Sheep can eat grass much shorter than cattle because of their split upper lip, muzzle, and more mobile lips. They strip the leaves and tips from long-stemmed grass and leave just the bare stem.

Most sheep breeds are practically mature when about twenty-four months of age. Liberal feeding tends to hasten maturity in the blocky mutton types. The fine wool breeds like the Merinos and Rambouillets are the longest lived sheep breeds. Sheep breeds that develop more slowly tend to have a longer life span. Such fine wool breeds seem to possess more stamina and vigor to resist unfavorable conditions than some of the strictly mutton type breeds. This is one reason why many farmers and sheep ranches use western ewes in establishing grade flocks.

Sheep prefer high, well drained resting places. It is generally during stormy weather that sheep seek protected quarters that are dry under foot. Nebraska has a rather dry sunny climate that is favorable to sheep production.

The initial cost of getting started need not be high. The outlay for equipment need not be expensive, as you can usually make good use of some sheds and equipment already on hand. You will also need a feed rack for hay and grain and several sheep hurdles to pen off ewes in sheltered quarters at lambing time. Sheep respond to good care and management just like other classes of livestock.



## Suggestions For Inexperienced Beginners

Club members will vary a lot in what they know about sheep when they start their club work. Some boys and girls will have had experience helping parents with sheep on the farm. Parents of others will know something about sheep, while in other families neither the parents nor the boys and girls have ever had a lamb or a sheep around before.

The next few pages are for the last group particularly, and also for parents with limited experience who want a quick review before they help the members get their first lambs. The latter part of the manual will be helpful to all the members because there is always something new to learn.

The most practical project for the beginners without experience is a market lamb project starting about the first of May and ending after the fair in the fall. Several lambs might be fed and shown.

Common questions are:      Where can we find the lambs?  
                                    How much will they cost?  
                                    Where can we keep them?  
                                    What should we feed them?  
                                    How can we avoid losses?

Finding the Lambs: Farmers with flocks of sheep may have a few orphan lambs to spare. You might get some experience with these little orphans but your best market and show prospects are generally the lambs that are well nursed and grown, just the kind the flock owner does not care to sell unless he is a good friend and interested in your 4-H club. There are two good reasons why he does not care to sell good lambs off their mothers. One is that it may spoil the ewe's udder to take the lamb away suddenly, and the other that a lamb that is doing well about the first of May will continue to grow without much work and trouble.

The Cost: You may have to really talk to the flock owner to get him to part with his best lambs, and you will have to pay a premium above the seasonal market price to get them. Fortunate indeed is the club member who has some good ones to choose from right on his farm. You can be in this position, however, in a year or two if you lamb out some ewes yourself. Also you will have learned more about sheep in your club work.

Where to Keep Them: The stall might be a box stall in the barn that has been cleaned and disinfected and well bedded with bright clean straw. It should have windows or doors that will let in a lot of sunshine. Walls should be tight with no places for the lambs to get their heads caught. A small tub for water and a small box for grain should be provided. The tub and trough should each be about eight inches from the floor and located so you can feed and water the lambs without going into the stall. A few vertical slats in a corner will make a satisfactory rack for some hay.

The lambs will need a small pen outside the stall. It should be made of wooden panels with the boards close enough together so the lambs cannot get through the cracks or get their heads caught in them. A little later, they will enjoy a good pasture. It should have a woven wire or wooden fence. If the pasture is away from the buildings a shelter shed may be used instead of the box stall and the feed trough may become a bunk.

What to Feed Them: Before bringing the lambs home, put water in the tub, grain in the trough, and hay in the rack in the stall. The grain can be half whole oats and half wheat bran by measure unless you know what the lambs have been eating and can get some of the mixture. About a handful per lamb would be plenty. They may not eat much of it until they have settled down in their new home.



A good ration for fattening lambs in May is five parts by weight of shelled corn, five parts of whole oats, and one part of soybean or linseed oil meal, along with alfalfa hay. Less oats can be used later in the season. At four months of age, lambs should be eating about 1 pound of this grain mixture and 1 1/4 pound of alfalfa per day per head, and should be gaining one-fourth to one-third pound per day.

When the lambs go on pasture, they will eat only a little hay but some should always be available. Salt in a box protected from the weather should also be available. Other suggestions about rations can be found in the latter part of this circular.

Avoiding Losses: One of the valuable lessons you as a beginner will learn is how to handle sheep. Before you start after the new lambs, be certain everything is ready in their stall and pen. Ask the experienced flock owner how you can get them home, or have him help you if he will. They will be frightened so give them no chance at all to jump out and get away. Put them into the stall and close the gates and doors. Leave them alone. Keep dogs, cats, chickens, and people away from the stall the first day or two. Generally about the third day you can go into the stall and probably turn them out into their pen. This will be another new place for them so take it slow and easy again.

An experienced club member or flock owner can show you how to catch and hold a lamb. Move slowly and quietly when you feed and water them. Their curiosity will make them try to find out who you are and what you are doing. When they do not seem to be afraid of you, try to catch them from the left side, one hand under the chin and the other back of the head at first. Then try holding the wool under the jaw with the left hand and the left hind leg, high up, with the right hand. Never get rough with them or hurt them while you are doing this.

Dogs sometimes frighten sheep and occasionally kill them. Teach your own dog to leave them alone and avoid damage from other dogs by having a good place for the lambs to stay at night.

Study the latter parts of this circular to learn how to feed them without having digestive troubles, and how to recognize disease and pest troubles. As soon as you think something might be wrong, find out more about it, and call a veterinarian if you seem to be having serious trouble.

If you get lambs about the first of May, they should be three to four months of age and weigh 60 to 65 pounds. By August 1, they should weigh about 85 pounds or more and be in good condition. By increasing the corn in the ration and cutting down on the hay and pasture, you can put the finish on them in 30 days.

You can learn the most by studying the circular about fitting and showing livestock and watching the experienced members and sheep men.

## **Common Terms, Parts of Sheep, Breeds, Age.**

There are a number of terms used in describing sheep that have a rather specific application, such as type, breed type, breed character, symmetry, balance, quality, scale, substance, and the like.

Type can be defined as a standard of perfection in which the characteristics contributing most to the animal's value and efficiency are all combined in one animal. So, in mutton type sheep, breeders have endeavored to develop the characteristics most favorable to the production of the ideal mutton form.

Breed Type and Breed Character combine certain characteristics of one breed such as size, shape, style, color marking of head, ear and legs, and fleece covering, style and refinement somewhat different from that of any other breed.



Symmetry means balanced development of all parts of the body. Generally speaking sheep that possess a broad, deep, well developed rear quarter and wide, thick loin are well proportioned as to other parts of the body. Such an animal is most likely to possess a well developed chest and full heart girth.

Quality is a term used to indicate freedom from coarseness about the head, body conformation or appearance in general. Sheep with medium sized heads and ears, trim necks, dense flinty bone, and dense, compact, well crimped fleeces have quality. Quality is in a sense refinement that contributes to style, beauty, activity, neatness, and ability to wear well without sacrificing usefulness for the purpose intended.

Scale refers to size, weight, bony framework, bone and natural muscular growth development.

Substance. One would ordinarily consider sheep that possess clean cut, flinty bone, and balanced conformation to possess substance. You often hear a breeder state, "That is a rugged animal with plenty of substance."

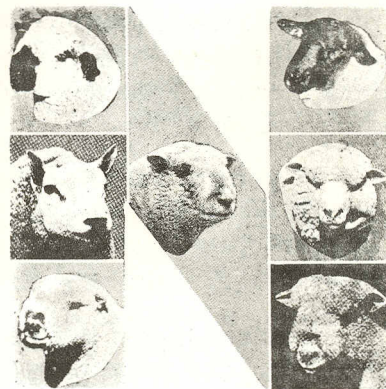
Style is a term associated with a high degree of body development in balanced conformation. A stylish, graceful animal has eye appeal as it stands or moves in any position. All body parts are in balance, thus providing natural grace in every movement.

Constitution has reference to chest capacity that provides ample room for the vital organs to function properly. This is indicated by length and fullness of the fore-ribs and the width between the forelegs. Such animals may be said to possess a robust constitution.

## CLASSIFICATION OF SHEEP BREEDS

This illustration shows the head type of seven prominent sheep breeds --all from the medium-wool, mutton-type group. The upper left head illustration represents the Hampshire; middle left, the Cheviot; the lower left, the Shropshire; center, the Southdown; upper right, the Suffolk; middle right, the Corriedale; and lower right, the Oxford. All of the breeds except the Corriedale originated in the British Isles. The Corriedale came from New Zealand.

Breeds of sheep are divided into two general groups, the mutton type bred primarily for meat, and the fine wool type grown for wool production. The fine wool breeds are not as suitable for meat but excel in the production of the very finest grade of wool. The two main breeds in this group are the American Merino and the Rambouillet.



There are two classifications of mutton sheep, the medium wool type and the long wool type. The medium wool type includes breeds of medium size, rather compact in body type, fairly short of leg, with dense compact fleeces of medium length. The following breeds come in this classification.

- |               |              |               |            |             |
|---------------|--------------|---------------|------------|-------------|
| 1. Hampshire  | 3. Oxford    | 5. Dorset     | 7. Cheviot | 9. Columbia |
| 2. Shropshire | 4. Southdown | 6. Corriedale | 8. Suffolk |             |

The long wool type, mutton breeds are larger and heavier and more upstanding with longer, more open fleeces much coarser in texture. These breeds are:

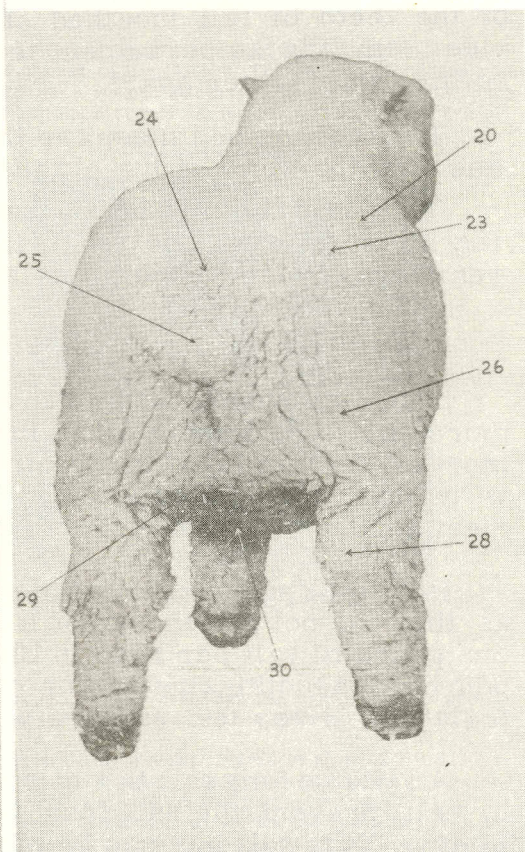
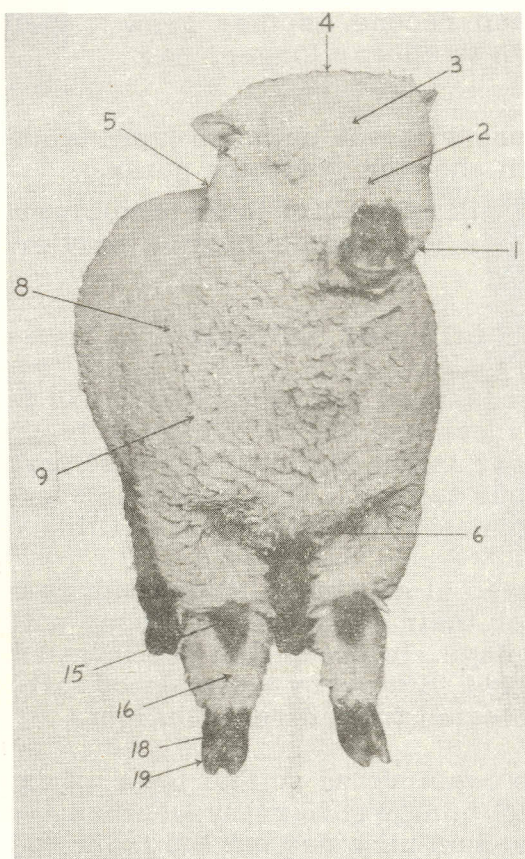
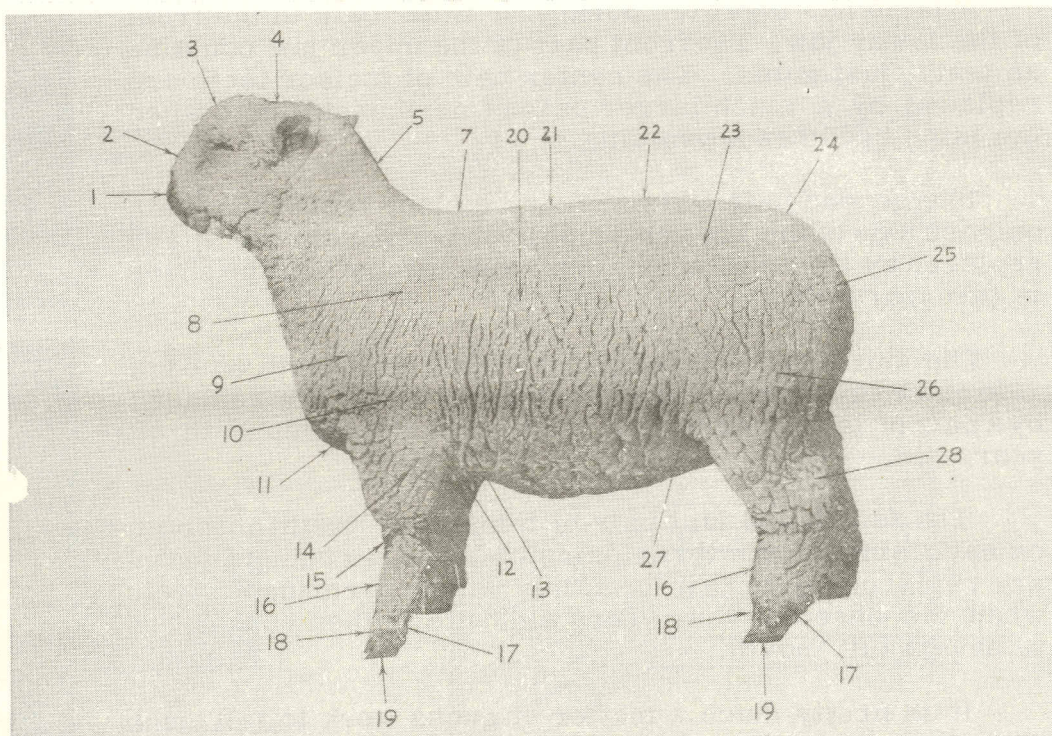
1. Lincoln. 2. Cotswold 3. Leicester 4. Romney



# PARTS OF THE SHEEP

In the previous paragraph, you have noticed reference to classes and breeds of sheep. The following illustration is included to help new club members become familiar with all the named parts of a sheep.

- 1 - muzzle (lips, mouth, nostrils)
- 2 - face
- 3 - forehead
- 4 - poll
- 5 - neck
- 6 - floor of chest
- 7 - top of shoulder
- 8 - shoulder
- 9 - point of shoulder
- 10 - arm
- 11 - brisket
- 12 - elbow
- 13 - fore flank
- 14 - fore arm
- 15 - knee
- 16 - shank or shin
- 17 - dewclaw
- 18 - pastern
- 19 - hoof
- 20 - ribs
- 21 - back
- 22 - loin
- 23 - hip
- 24 - rump
- 25 - dock
- 26 - thigh or 'leg'
- 27 - rear flank
- 28 - hock
- 29 - twist
- 30 - cod in wether, scrotum in ram, udder in ewe





## CHECKING TEETH FOR AGE

A lamb has eight temporary or milk teeth in the front of the lower jaw. The front part of the upper jaw contains no teeth, just gums. The center pair of incisor teeth are replaced by a much larger pair of permanent teeth when the lamb becomes a yearling.

The second pair of temporary incisor teeth (one tooth on each side of the big center pair of permanent teeth) are replaced by a pair of large permanent teeth when the sheep is two years old.

The third pair of temporary teeth (one tooth on each side of the two pairs of large permanent teeth) are replaced by a pair of large permanent teeth when the sheep is three years old.

The fourth and last pair of temporary teeth (one tooth on each side of the three pairs of large permanent teeth) are replaced by a pair of fairly large permanent teeth when the sheep is four years old. He is then considered to have a full mouth.

It is pretty much a matter of guess work to tell much about the ages of sheep from then on. The gums at the base of the teeth of full mouthed sheep recede as they grow older, causing the permanent teeth to appear longer, narrower, and farther apart.

Broken mouthed sheep are those with one or more front teeth missing while a gummer has only the stubs of the old teeth showing above the gums.

Very late summer lambs may still have all of their temporary or milk teeth the following summer when the older lambs born some months earlier have their center pair of yearling permanent teeth in place.

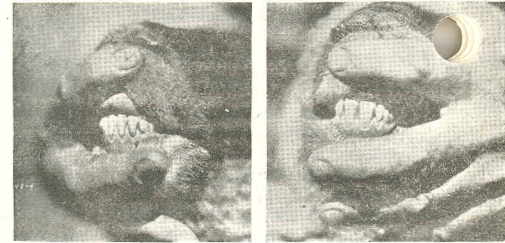
## Feeds for Sheep

Sheep thrive on all grain feeds used for other classes of farm livestock. They are more particular about what they eat and drink. Be sure to clean all feed bunks every morning and night before fresh feed is put in them. See also that no grain, hay, or silage is moldy. Moldy feed is dangerous to feed. The water supply needs to be kept fresh and clean. Clean and rinse the sheep water tub daily before filling with fresh water.

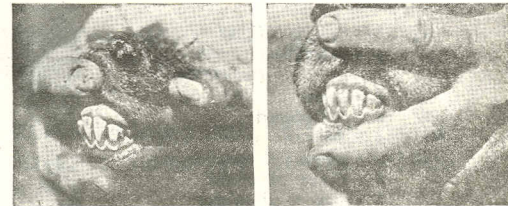
Have bulk salt available for sheep at all times. Block salt is not satisfactory for sheep as they do not get enough of it for their daily needs. Sheep will normally consume about one pound of salt per head in 100 days. In areas that are infested with stomach worm, one pound of phenothiazine can be mixed with every 9 pounds of salt to help prevent worm infestation. Keep this mixture protected from direct sunlight.

A suitable long salt box can be constructed so that the roof extends forward far enough to help prevent the salt from becoming wet in rainy weather and thus becoming hard and lumpy. This salt box can be closed on all sides but the front and mounted on short pieces of 2" by 4" material at each end. Have these 2" by 4" pieces extend well forward to prevent the salt box from tilting forward.

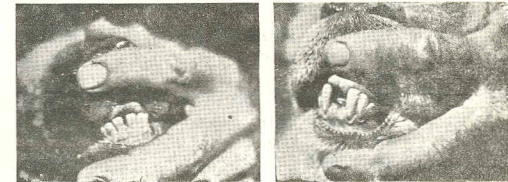
Sheep need a balanced ration the same as other livestock in order to make the most economical gains. Proteins, carbohydrates, fats, minerals, and vitamins should be included in sufficient amounts to properly nourish them, using home grown feeds as much as possible.



Age changes in incisor teeth of sheep. Left-lamb's mouth with four pairs of milk teeth; right-yearling mouth with one pair of permanent teeth.



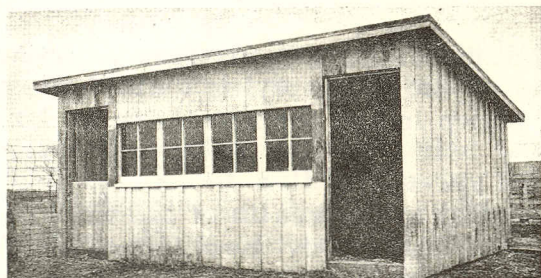
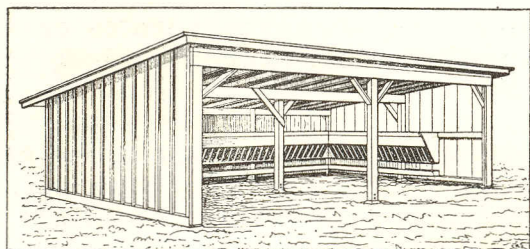
Left--2-year-old mouth, with two pairs permanent teeth; right--3-year-old mouth with three pairs permanent.



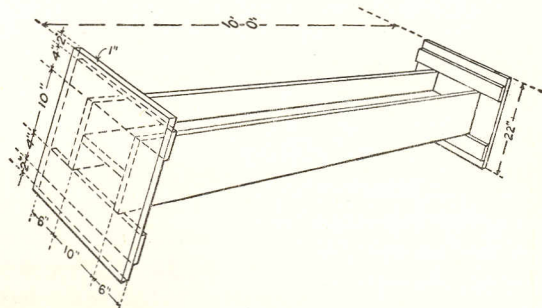
Left--4-year-old mouth all permanent; right--a broken mouth



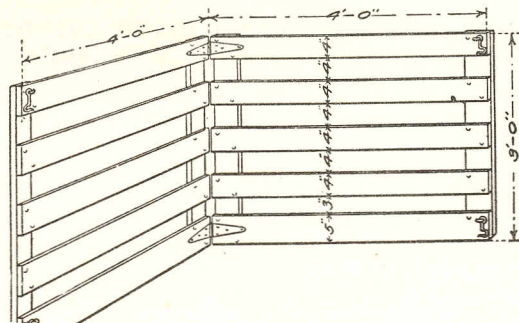
## Equipment



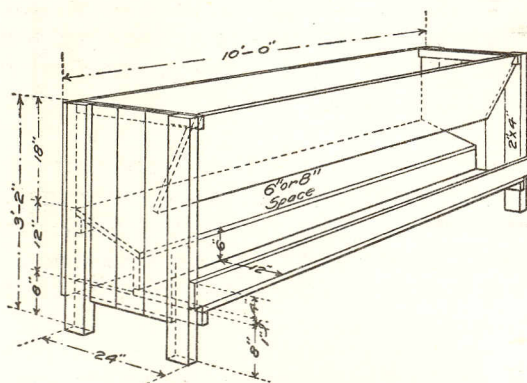
A simply constructed shed open to the south provides the most satisfactory sheep shed for a small flock of ewes. It has ample ventilation, is dry and sunny.



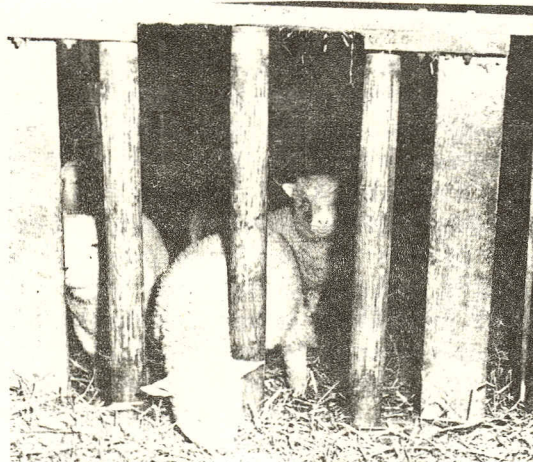
Reversible movable grain trough with square ends.



Four to six foot hinged panels are also very handy in separating a ewe from the rest of the flock or for making two sides of a lambing pen. Two such hinged panels with hooks or hasps at the ends can be used to make a complete pen for ewes about to lamb.



A combination wall hay and grain feed rack prevents the chaff and dirt from getting down into the neck and back of the ewe's fleece as she eats hay or grain. It can be set to the side of the shed or barn space, and does not take up much space.



Your lambs soon discover any opening in the yard fence where they can crawl through. They discover the wheat bran or ground oats in the creep feeder and soon start to nibble on it.

The idea of substituting upright rollers in place of the old upright wooden slats for the lambs to pass between as they enter the creep was indeed a brilliant idea on the part of someone. The upright rollers turn in the direction in which the lamb is going and prevent bruising their sides as well as admitting the larger lambs that could not enter the creep when the old stationary upright slats were used. These upright rollers admit the lambs but prevent the ewes from entering the creep.



Protein is used in maintaining body growth, muscle development, and for repairing body tissues. Any excess of protein in the daily ration is used to supply heat and energy.

Carbohydrates. Practically all farm-grown grains are high in carbohydrates or starchy material. Such feed grains are valuable in protein and minerals needed for body growth, muscle development, and nourishing the skin and wool.

Minerals are necessary for building bony framework of the body. Salt is one mineral that must be supplied at all times. Calcium helps to develop strong flinty bone and can be secured in the form of ground limestone. Phosphorus along with calcium combines to develop a still more rugged body framework of body bone and tissue. Both of these minerals can be secured in the form of steamed bone meal. Good alfalfa hay will furnish an excellent supply of minerals.

Iodine, when deficient in the soil area from which the crops are produced, can be supplied by providing iodized bulk salt. There is no object in supplying iodine unless it is needed. One should go slow in supplying iodine to sheep in any form as there is danger in feeding too much of it.

The four main minerals just mentioned are essential to the health of the flock. There are other minerals of minor importance that play a part in the body functions of sheep, but they are in sufficient supply in ordinary feed rations. If the flock has access to good pasture or legume hay, then the addition of minerals other than bulk salt may show very little advantage.

In instances where calcium or phosphorus are deficient, a special mixture consisting of one part of finely ground powdered limestone, one part of steamed bone meal and one part of bulk salt, by weight, can be mixed and made available for the flock. Sheep should not be required to consume other minerals in order to secure what salt they need. Salt should always be available to them whenever they need it, free from any other ingredients.

Vitamins play an important role in maintaining healthy sheep. Vitamin A is lacking in winter roughage that has been weathered and is brown in color. Bright alfalfa hay and other bright legume hays contain Vitamin A. Of all the home-grown grains, only yellow corn contains Vitamin A. Sheep relish root crops such as yellow stock carrots and rutabagas which are a source of Vitamin A.

Concentrates. It may be well at this time to mention the fact that concentrate feeds should not be fed in excess of 45 per cent of the total combined grain and roughage ration. Feed rations containing more than 45 per cent of concentrates are likely to cause lambs to go off feed. Once lambs go off feed, they are a problem to get back on full feed again. Such lambs are what some sheepmen term "burned out inside," like beef cattle when first becoming foundered.

Except for old broken mouthed ewes, grinding grain for mature sheep or for lambs three to four months old is unnecessary. Grains are low in protein and fat, but high in carbohydrates.

Corn is our most palatable grain. It is our most efficient fattening feed for livestock. It can also be used in limited amounts when combined with suitable high protein feeds for the breeding flock. It carries a high percentage of digestible nutrients, namely carbohydrates and fats, and produces a firm finish.

Barley is another fattening grain much relished by lambs. It produces rapid gains and tends to prevent long fed lambs from becoming rough and patchy in fleshing. It is more cooling than corn when fed during hot weather. Barley has about 90 per cent of the feeding value of corn.



Grain Sorghums have a place in lamb fattening operations. They give the best results when fed in coarsely cracked form. They are about equal to corn in fattening value for lambs. Grain from sweet sorghum is about 85 per cent as efficient in fattening value as corn.

Oats are more bulky than other farm grains. They add considerable growth and bone building material to the ration. Whole oats are well suited for nursing ewes and starting young lambs on creep feed, also for developing young ewe lambs for the future breeding flock. Oats should not supply more than one fourth of the grain part of the fattening lamb ration.

Wheat is a good sheep feed when combined with other grains. Lambs do best on wheat when it is coarsely cracked. For some unexplained reason, wheat has not given as good results in lamb fattening rations as corn.

Rye is somewhat unpalatable but is liked better by sheep than by any other livestock. Feeding tests list rye as giving results equal to barley when fed to fattening lambs.

Beet Molasses can be added to any sheep ration, but presents a problem of the best method to feed it without having the lambs all gummed up around the head. It is about equal to corn when fed with other feeds. Some feeders pour a thin ribbon of molasses down through the center of the feed trough and then scatter the other grain over it.

Dried Beet Pulp proved to be a good sheep feed about equal to corn when replacing not to exceed half of the grain ration. It adds bulk to the ration; also acts as an appetizer to help keep lambs from going off feed.

Wet Beet Pulp when combined with alfalfa hay and grain provides an excellent fattening ration. This product is used quite extensively in parts of Nebraska. The initial cost is very low, thus lowering the cost of gains. Wet beet pulp is also recommended for fattening old broken mouthed ewes.

Wheat Bran is one product that is recommended in practically all lamb and ewe feed rations. It is a palatable feed with a protein content of about 15 per cent. It supplies bulk to the ration and is somewhat of a laxative. The amount of bran need not exceed 5 per cent of the grain ration for older fattening lambs.

Cotton Seed Meal is another protein supplement in general use. It is a good appetizer, but lacks the laxative effect that either linseed or soybean meal has on sheep.

Linseed Meal is included in practically all grain rations for breeding ewes, young lambs, or lambs being fitted for show purposes. It acts as an appetizer and is a mild laxative when included in dry rations during the winter months.

Soy Bean Meal has a highly digestible protein content, but is somewhat low in mineral matter. It is generally in greater supply than any other protein supplement.

Linseed meal, soybean meal, and cotton seed meal are best fed in the pea size form for lambs. All three of these protein supplements are high in protein content, and provide an excellent combination with common farm grains to balance sheep and lamb feed rations.

## Roughages

Bright, well cured alfalfa hay is far superior to other roughages for sheep. Alfalfa hay is a palatable feed, high in protein content and well supplied with calcium and the necessary vitamins so essential to the health of the flock.

Brome-alfalfa meadows, when not grazed, can supply another source of dry roughage if put up in bright condition. It is much lower in protein content than alfalfa, due to the brome in the hay.



Prairie grass put up in August and September has little value for sheep. Prairie grass cut and put up in late June or early July is far better and much higher in protein content and contains some Vitamin A.

All other roughages such as sorghums, corn stover, wheat and oat straw supply bulk, but are very low in protein content and need to be combined with a high protein supplement in order to make the best use of them.

## Succulent Feeds

The various pasture grasses provide one of the main sources of succulent feed for sheep. Tender grass is one of our best sources of protein, mineral nutrients, and vitamins. Bluegrass is excellent in early spring and late fall, but becomes somewhat dormant during July, August, and early September and needs supplementing at this time. A brome-grass-alfalfa pasture combination offers grazing during the spring and fall months, but slows up too during hot weather. A pasture containing a mixture of warm season grasses would fill the gap nicely during this period.

A few pasture lots adjoining the barnyard area would produce an abundance of grass due to the excess of fertility coming from the barnyard area during rainy weather. One of these pasture lots can be seeded to winter rye early in the fall to provide some late fall and early spring pasture for the ewes and young lambs before pasture grasses are available. Sheep pastures are often located too far away from the farm buildings to be most useful.

Silage is a good substitute for grass. It can be made from mature standing corn, sorghums, or from grass. Extreme care should be taken to see that no frozen or moldy silage is fed to sheep, to avoid any death losses. All forms of silage are low in digestible protein and need to be fed with a high protein supplement. Mature ewes can eat 4 to 5 pounds per head daily of clean silage and feeder lambs about half this amount.

## Feed Rations For Bred Ewes

The following roughage rations are made for ewes in the first half of pregnancy:

- |                                 |                                       |
|---------------------------------|---------------------------------------|
| (1) Alfalfa hay - 3 to 4 pounds | (3) Brome-alfalfa hay - 4 to 5 pounds |
| Corn silage - 1 to 2 pounds     | Other legume hays - 1 pound           |
| (2) Alfalfa hay - 3 to 4 pounds | (4) Alfalfa hay - 1 to 2 pounds       |
| Corn stover - 1 to 1 1/2 pounds | Grass silage - 4 to 6 pounds          |

Rations the last two months before lambing time may include roughage with 1/2 to 1 pound daily of the following grain rations:

Ration (1) with alfalfa hay only.

Whole oats . . . . 50 pounds  
Shelled corn . . . . 40 pounds  
Wheat bran . . . . 10 pounds

Ration (2) with alfalfa hay and corn silage

Whole oats . . . . 50 pounds  
Shelled corn . . . . 30 pounds  
Wheat bran . . . . 10 pounds  
Linseed meal . . . . 10 pounds

Ration (3) with alfalfa hay and grass silage

Whole oats . . . . 30 pounds  
Shelled corn . . . . 60 pounds  
Wheat bran . . . . 10 pounds

Any of the above grain rations may be fed at the rate of 1 to 1 1/2 pounds daily per head from a week to ten days after lambing and continued until a week before the lambs are to be weaned, if the ewe flock is not on grass pasture.



## Creep Feed Rations for Spring Lambs

Lamb ages, 10 days to 2 months.

(1)	(2)	(3)
Ground oats . . . 20 pounds	Whole oats . . . 30 pounds	Whole oats . . . 30 pounds
Wheat bran . . . 10 pounds	Cracked corn . . . 20 pounds	Cracked corn . . . 30 pounds
	Wheat bran . . . 10 pounds	Wheat bran . . . 10 pounds
		Linseed meal . . . 10 pounds

Lamb ages 2 to 6 months.

(1)	(2)	(3)
Whole oats . . . 40 pounds	Whole oats . . . 40 pounds	Whole oats . . . 20 pounds
Shelled corn . . . 40 pounds	Shelled corn . . . 60 pounds	Shelled corn . . . 60 pounds
Wheat bran . . . 10 pounds	Wheat bran . . . 10 pounds	Wheat bran . . . 10 pounds
Linseed meal . . . 10 pounds	Linseed meal . . . 10 pounds	Linseed meal . . . 10 pounds

The corn in all the grain mixtures may be substituted by grain sorghums. Oats may be replaced by barley over a short feeding period. Soybean meal and cottonseed meal may be substituted in the place of linseed meal. Lambs prefer the pea-size protein supplement instead of the meal. Feed good green leafy alfalfa all the time.

Successful sheep raising does not require an expensive outlay, but it does require continuous attention to details.

## Some Musts in Feeding Spring Lambs

1. Best planned ration ineffective unless fed right.
2. Feed lambs twice a day, morning and evening.
3. Clean grain and hay racks before adding fresh feed.
4. Provide about 1 foot of feed rack space per lamb.
5. Feed grain and silage first, then follow with hay.
6. Rinse and clean water tubs daily, then refill with water.
7. Keep a week's supply of bulk salt before lambs at all times.
8. Have a regular feeding time morning and evening.
9. Keep shelter quarters clean, dry, and well bedded.
10. Always be quiet as you work among ewes and lambs.

## Spring Ewe and Lamb Ration

A good practical grain ration for both nursing ewes and young lambs can be made from the following ingredients:

50 pounds of plump whole oats,  
40 pounds of cracked or shelled corn,  
10 pounds of wheat bran.  
10 pounds of soybean or linseed meal.

This ration contains enough protein to promote growth on the young lambs, maintain the body weight of the nursing ewes, and to complete the growth of the ewe fleeces. Two-month-old lambs do not need to have grain ground for them any longer. One third pound per head per day of this grain ration can be safely fed to these lambs, supplemented by bright alfalfa hay in racks separate from where the grain is fed.

The nursing ewes can be fed from 1 to 1 1/4 pounds of this grain ration per day per ewe with the addition of 3 to 4 pounds of alfalfa hay per head per day. The grain and roughage ration can be reduced about one half as soon as the ewe flock has access to green pasture grass. This half ration of grain for the ewes should be continued for a few weeks until the grass passes the washy stage and becomes more nutritious, then the grain may be eliminated altogether. There is no other feed like green, succulent grass to put fast, cheap gains on sheep.



When the ewe flock is changed from being grain-fed twice a day to once a day while on grass, feeding the grain at night will tend to bring up the flock in the evening to be fed, and save a trip to round them up. The only really safe way to manage sheep is to have them yarded in a corral surrounded by a high woven-wire fence to protect the flock from roving sheep-killing dogs.

## Value of Rotation Grazing

There are three main reasons in favor of following the practice of rotation grazing with sheep. (1) Sheep graze grass shorter than cattle. (2) More feed is obtained from a given area. (3) Rotation grazing also tends to lessen the chance of the flock becoming infested with internal parasites.

Be sure that the flock has access to salt prior to and during the time they are pastured on grass. To help prevent bloat, most sheepmen feed dry roughage to the ewes just before they are turned on pasture containing legumes. Bloat is most frequent in the early spring, or when grass is growing rapidly.

Nebraska is blessed with a good variety of native grasses, most of which are relished by sheep. Exceptions are the tall, coarse grasses. The various cool and warm season pasture grasses now grown in Nebraska provide excellent grazing for sheep. We have brome grass and bluegrass early in the spring, the warm season grasses to graze on during the hot summer months, with brome, alfalfa, and bluegrass combinations providing good grazing in the fall months.

Sheep are very valuable in cleaning up a weedy area, along with grazing on good grass. We should not expect sheep to thrive long on neglected weedy areas, however, if we expect to profit by having them. Sheep deserve the same good care, feed and consideration that we give to other classes of livestock. Scours may be produced so watch for maggots. Wash out the filthy wool if necessary.

## Ailments of Sheep

It is much easier to spot a sick lamb in a small flock than in a large one. Lambs that are thin, weak, stiff as they walk, coughing, and discharging from the nose indicate that something is wrong. Timely attention can save most of them.

Navel Ill is a condition caused by a puss-forming organism that enters the blood circulation through the end of the navel cord. The best preventive measure is to apply tincture of iodine to the navel cord as soon as the lamb is born.

Sore Eyes occur most frequently among lambs from breeds of sheep with wooly heads. Infected lambs should be separated from the other lambs. Apply a solution of boric acid with a medicine dropper twice daily for a few days.

Sore Mouth is caused by a bacteria or virus. Remove scales about the mouth and lips and apply a moderate strength solution of tincture of iodine. Some types of sore mouth may respond to vaccination.

Pining frequently affects lambs after birth. The feces become sticky and form a mass about the base of the tail. This prevents further passage of the feces from the body. This accumulation should be removed so that affected lambs can void feces without further difficulty.

Pneumonia may be caused by the lambs being penned in damp, poorly ventilated quarters, or when they are subjected, to direct drafts of air. Lambs become sore and stiff, cough and have a discharge from the nose. Place affected lambs in warm, dry, well bedded quarters free from any direct drafts.



Constipation causes lambs to lose their appetite, become dull and listless, and frequently strain in trying to void feces. Give such lambs one teaspoonful of castor oil through the mouth and give soapy water injection to aid in passing the feces.

Over-Eating Condition is quite common among lambs that have been on full feed for some time and that are fat and about ready to be marketed. Withhold grain and hay and provide a moderate amount of wheat bran for a few feeds. Some feeders believe they have received help by vaccinating for over-eating diseases.

Bloat is caused by acute indigestion followed by the formation of gas in the large stomach. It happens most frequently when sheep that are hungry graze on wet alfalfa pasture. The left side of the paunch becomes much enlarged, and this can prove fatal unless proper treatment is given without delay. A teaspoonful of kerosene given in milk as a drench may relieve some cases. Supply the flock with plenty of dry roughage if alfalfa grazing is to be continued. Avoid sudden changes of feed.

Blow Fly Infestation is most frequent in lambs that are not tail docked. Undocked lambs get to scouring, resulting in a mass of feces accumulating about the base of the tail, thus providing ideal conditions for blowfly infestation. The blowfly eggs hatch shortly and change into tiny maggots which start their destructive work. Flesh wounds are soon caused and infected lambs may die if relief is not given at once. These maggots can be eliminated by cutting the wool three inches back from the wound and applying Smear 62, or EQ-355 to affected parts. Keep a supply on hand all the time.

Stomach Worms can become a very serious problem calling for prompt treatment. The common practice of grazing the sheep flock on the same pasture area all through the grazing season intensifies the seriousness of the situation. Stomach worm-infested sheep void feces containing stomach worm eggs. These eggs soon hatch and become larvae curled up on the under side of the grass blades. The lambs become infested by consuming grass carrying these larvae which reach the lamb's stomach and there develop into mature stomach worms.

The infested lambs soon become dull, listless and emaciated and begin to scour. The skin on the inner side of the eye lids becomes pale. The skin next to the wool becomes pale and off color and feels "paper like" to the hand. Such lambs will soon die if not given proper treatment.

A solution of Phenothiazine as a drench is now universally used to treat lambs infested with stomach worms. Prepare a drench according to the instructions on the package containing the Phenothiazine.

Catch the infested lamb and back it into a corner of the pen, then straddle its neck to help hold it firmly in this position. With the left hand, raise the lamb's head until its mouth is level with the back. Take a loaded syringe in the right hand and insert a dose pipe into the mouth and down to the lamb's grinder teeth and allow the lamb to chew on the pipe a few times. Now, force part of the drench into the back of the lamb's mouth from the syringe in the right hand. Force the balance of the solution out of the syringe and down the lamb's throat and proceed as before. Give the lamb plenty of time to swallow the solution. Be careful not to hold the nose of the lamb too high as it might choke and get some of the drench solution down the windpipe.

Sheep ticks are frequently found in flocks of sheep. Sheep ticks suck the blood through the sheep's skin, causing it to become irritated. Sheep then become uneasy, and start to rub and tear their wool. These ticks are rather flat and reddish brown in color. Tick-infested flocks should be dipped or sprayed with standard dips or DDT about two months after the flock has been shorn.

Sheep Lice of two types infest sheep. One is the sucking louse and the other is the red-headed biting louse. Methods of eradication are the same as for ticks.



Screw Worm flies lay their eggs during warm weather on wet dirty parts of the sheep's fleece or in open flesh wounds in the skin. The eggs hatch in a few hours into larvae or maggots which start to eat on live flesh of the animal. Infested sheep are restless and try to touch the affected parts of their body with their mouth.

Trim away the sloughing skin and dirty wool in and around the wound and cleanse with a good disinfectant. Apply Smear 62 or EQ-355 in the affected parts of the wound. Continuous treatments should be made every few days until the wound has healed.

## The Market Lamb Project

This Nebraska 4-H club project usually includes one or more lambs bought about April to be fed 90 to 120 days, shown at the fairs and sold as fat lambs at the close of the fairs. Early January lambs that are already docked and castrated when purchased will prove most satisfactory. Obtaining such lambs will be greatly simplified if you can locate a good grade flock owner who is willing to spare a few January lambs for your 4-H project. This is not the normal time of year for him to market his lamb crop, nor is September the best time of year to plan to sell the fat lambs at a profit, so you may have to buy too high and sell too low. The project does, however, fit into the 4-H club season and give members the experience and enjoyment of showing livestock at the fairs. If special sales and publicity can be arranged, it may be possible to obtain a higher price than selling on the commercial market.

Another possibility, not yet developed to any extent, would be to make more exhibits in the lamb show held in connection with the state wool show at Omaha about the first of June. Groups of lambs are shown there now. It would provide a climax to the project at a time of year when lamb prices are usually higher than they are in the fall. Lambs for such a show and market are creep fed and forced for the early market in contrast to a feeding program of pasture and some grain for those marketed in September.

In feeding market lambs, follow the suggestions about rations in the section entitled "Feeds for Sheep," and about equipment and management in other parts of the manual. You will get help on fitting and showing from the last section of this manual and from the circular about fitting and showing livestock.

For those with experience with sheep, feeding a group of western lambs may be a good market lamb project. The run of western lambs starts to terminal markets sometime in August, increasing rapidly through September and October and slowing up early in December. Market prices usually reach their lowest levels during these months. Native feeder lambs are usually rather hard to find and are not as uniform in type and quality as range-raised lambs. Most such lambs are obtained through the terminal markets or through your terminal market commission firm on order. One should consider where the best lambs can be obtained at the lowest cost. If arrangements can be made to buy directly from a producer, some marketing charges may be by-passed. Such lambs should be stocky, low-set, and be uniform as a lot. They should be in good thrifty condition and have compact, unbroken fleeces free from any burrs.

They should be given all the water they will drink upon arrival at your farm. Provide good dry roughage and a little grass if available. Feed an economical ration and keep a watchful eye on the lambs every day in order to avoid any serious losses.

It takes from 100 to 120 days to fatten a 60-pound western feeder lamb. Some feeders estimate that it will take from 2 1/2 to 3 bushels of corn and 125 to 150 pounds of good legume hay per head where home-grown feeds are used.

Western lambs have not eaten grain so they need to be brought along gradually. They can be started on about one-eighth pound of whole oats per head daily with corn and oats or corn and barley replacing the oats after a week or ten days. Increase grain gradually for 30 days until each lamb is getting one pound of grain per day along with two pounds of

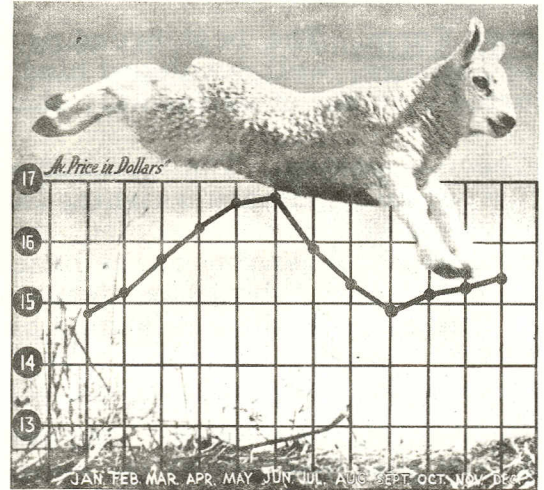


good legume hay. This ration can be increased some on heavier lambs. Addition of soybean or linseed meal will be beneficial. Some time can be profitably spent finding out where the best feeds can be obtained at the lowest prices.

Watch for any lambs "going off feed" and scouring. Provide plenty of fresh clean water and what bulk salt the lambs will consume after they have had access to a limited salt ration for a time.

The lambs on full feed in a dry lot should not have a richer ration than 50% grain and 50% hay. Better results are usually obtained where the grain part of the ration does not exceed 45% of the total ration.

During the entire feeding period, you should keep the selling date in mind. The important objective is to get the lambs to 85 to 95 pounds by that date. Profits will be increased by getting better than average lambs at less than average cost, by putting on gains at less than average cost, and by selling on the highest seasonal market. In deciding where to sell your lambs, all the possible markets should be considered -- a club sale, local auction, packer buyer, or livestock exchange.



## The Ewe and Lamb Project

Some 4-H club members take up this project and become enthusiastic about its possibilities. The job of developing a high grade or registered ewe flock is a pleasant experience. It can be a profitable adventure if the breeding stock are purchased at a reasonable price, your management is good, you keep the feed and overhead costs down, and you sell your surplus at a good price.

Good type mutton ewes that are not registered are well suited for the beginner and the initial outlay is usually lower than when purebreds are purchased. You may find more satisfaction in securing good purebred ewes later as you become more familiar with sheep management practices. Either grade or purebred ewes need to be selected with care.

Younger Ewes Preferred. Bred ewes from yearlings to three year olds are best for beginners in sheep club work. They have more useful years of lamb and wool production ahead of them as they reach their prime of life as breeding ewes. Yearling ewes are really preferred as they have never lambed and had an opportunity to develop spoiled udders. Second choice would be two and three year old ewes and third choice, four and five year old full-mouth ewes. Ewes from two to five years old should have udders checked carefully to detect any spoiled udders or teats.

It is not advisable to purchase ewes bred to lamb when they are about one year old. Such immature young ewes generally become stunted and develop into ewes of low vitality, making them more susceptible to all the various sheep diseases.

Condition of Udders. Anything that hinders the ewe's ability to produce milk for her lamb is a serious handicap for both ewe and lamb. Examine each ewe's udder and teats carefully. A sound udder is soft and pliable, and contains no hard or lumpy sections. Check both teats to see if they are free from injury or hard cores. Pass up any ewe that shows any abnormal udder condition.

Importance of Feminine Heads. Ewes with refined feminine heads are more likely to produce the better lambs. Such ewes possess more quality and are usually better bred and can transmit this character to their offspring.



Coarse headed ewes, somewhat masculine in appearance, are often a disappointment as producers of good lambs as they lack breed type and refinement. Leggy, coarse headed ewes are more likely to have coarser, lower grade fleeces with hairy-like wool on the outside of the hind legs.

Size and Type. Ewes of good size for the breed they represent are preferred. Under-sized ewes can normally be passed up as they do not produce as good lambs as the large, rugged ewes. There is no advantage in selecting very large ewes. They are more likely to be coarse and off type for the breed.

Body Form. The best breeding ewes generally possess deep, wide chests, full middles and square, well developed hind quarters. Their backs are straight and strong when supported by a set of moderately short, strong, straight legs.

Fleece Covering. The type and quality of the fleece is too often overlooked. A grade ewe that produces a fleece weighing less than eight pounds should be discarded. The fleece from purebred, medium woolled, mutton type ewes should average about ten pounds at shearing time, depending on the breed. A full year's growth of wool on mutton-type, medium woolled ewes should be dense and compact of good quality and at least 2 1/2 inches long. The belly of the ewe should be well covered with wool extending down to the knees and hocks. Most flock owners prefer ewes free of wool about the eyes and on the lower front half of the nose, so that vision is not impaired.

Vigorous Healthy Ewes. One should not select ewes lacking vigor and good health no matter how good they may be otherwise. Healthy ewes are lively and energetic. They have a deep, pink colored skin. There are some exceptions to this among some of the black-faced breeds. The eyes are prominent, bright and lustrous. Poor health may be associated with dullness of the eyes, coughing, chronic scouring, pale bluish tinted skin and dry harsh wool.

Ewe Flock Headed by Good Ram. Look at the ram when you start to inspect the flock. Look for a vigorous, active, masculine appearing ram. His size and breed type should be up to the standards for the breed he represents, with deep, well developed hind quarters. His fleece should be dense, firm and good quality, free from coarseness about the hind legs.

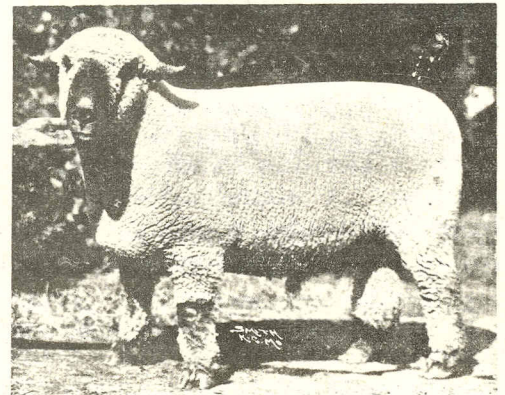
Purebred Flock to Show Breed Type. It is best when selecting purebred ewes to keep the breed character well in mind. Look for the characteristic head, nose and ear, the body type, and size for breed, and good dense, compact quality fleece. Off-type ewes should be passed up in selecting foundation ewes of any breed of purebred sheep.

Selecting the Ram. Too much emphasis cannot be placed on the importance of heading the ewe flock with a high class, purebred ram. This is true for either grade or registered ewe flock. Each lamb sired by the ram will carry 50 per cent of his blood lines. Your ram should be the best individual in the flock.

Some of the most successful sheep men suggest selecting the ewe flock first and then choosing a ram to mate them. Faults in the ewe flock can then be better corrected by selecting the right type ram that is strong where the ewes are faulty.

#### Nine points to Keep in mind in Ram Selection

1. Good size for breed.
2. Healthy, active and vigorous.
3. Masculine in head and body carriage.
4. Age, from one to three years old.
5. Body, broad and deep and well developed.
6. Thick loin and well developed hind leg.
7. Moderately short set of straight, strong legs.
8. An even, firm thick flesh covering.
9. Dense, firm, compact fleece and pink skin.





Rams that are of the really vigorous, active masculine type are more alert when with the ewe flock. Do not be surprised to have such a ram turn and watch you or walk out from the ewe flock toward anyone who is near. This active ram is just letting you know in his own way that he is the protector of the ewe flock. You seldom see a sluggish, inactive, plain headed ram watch you or come from the flock in the manner just mentioned.

Sheep Club Ram Project. Sheep club members who have only a few ewes have a problem on their hands to get their ewes bred for next spring lambs. Some such clubs have pooled their resources and obtained a suitable purebred ram.

When this plan is followed, one member's farm is chosen where facilities for assembling all of the club member's ewes is quite satisfactory, such as a good, dog-tight fence, proper corral quarters, and tender grass area for flushing the ewes. All such ewes need a definite mark of identification, usually on the ear on both grades and purebreds. This is one way to solve the ram problem at least until each member has enough ewes to justify purchasing a ram. This plan, however, is far from being perfect.

The Breeding Season. Club members who have carried over ewes for the second year and those who have selected a few open or unbred ewes need to make plans early for next year's crop of spring lambs.

Ewes should be bred five months before you want them to lamb. Ewes bred in September and October will lamb in January and February, and if bred in November will lamb in early April. The peak of lamb prices has been reached in May in most years.

Flushing. The practice of grazing the ewes on tender grass or second growth meadow or feeding a grain ration two or three weeks prior to the breeding season to put them in a thrifty, fast gaining condition is called flushing. This practice causes the ewes to come in heat earlier and take the ram over a shorter period of time so that the lambs will come nearer the same time the following spring. The percentage of lambs born following this flushing practice is usually somewhat increased over the normal lamb production when flushing is not practiced. Flushing ewes that are already too fat adds to the difficulty of getting a good lamb crop. Start making plans 3 or 4 months ahead of the breeding season so the ewe will be in the breeding condition you desire.

A daily ration of equal parts of whole oats and corn can be fed, varying from one half to one pound per head per day depending upon the condition of the ewes. Bright alfalfa hay can also be included in small amounts to help take the place of tender grass during the flushing period.

Conditioning the Ram. The ram needs a grain ration just before and during the breeding season to remain active and vigorous. A daily grain mixture composed of three parts of whole oats and one part of wheat bran in amounts of one to one and one-half pounds daily is satisfactory. Access to tender grass or to a small amount of good alfalfa hay during this time is essential to keep the ram in top breeding condition.

Fall and Winter Care of The Ewe Flock. The grain ration for bred ewes during the last 30 days before lambing could be three parts of shelled corn, three parts of whole oats, and one part of oil meal, fed one half to one pound daily per ewe depending upon the ewe's condition. Some sheepmen add some wheat bran to the ration just prior to lambing. Wheat bran is laxative and high in Vitamin E and gives more bulk to the ration.

Early-seeded rye or a good fall growth of bluegrass makes ideal pasture for bred ewes until cold weather comes. Three to four pounds of bright alfalfa hay per day will supply the roughage after the grazing season ends. No grain will be needed with the good pasture and hay until about six weeks before lambing time.



Sheep Particular About Their Feed. It is more important to keep water clean for sheep than for any other class of livestock. All grain feed bunks, hay racks, salt boxes, and water tanks should be kept clean at all times. No dirty, soaked, or sour grain should be allowed to accumulate in the grain bunks. The salt box is best covered over with some sort of weather protection to prevent the bulk salt from getting wet, and becoming hard and lumpy.

Importance of Ample Exercise for Bred Ewes. Bred ewes need plenty of exercise every day in order to keep in a thrifty, healthy condition. Lambs born of weak and puny ewes that do not get enough exercise are likely to be weak or die at lambing time. Some sheepmen feed roughage some distance from the sheep corral in order to force bred ewes to take more exercise. It is well to check the ewe flock frequently to see if any ewe is becoming too fat. Over-fat ewes could have difficulty at lambing time resulting in a dead lamb or one of very low vitality.

If the ewe flock just will not move out from their corral and take daily exercise, you can open the gate to some field and drive them for some distance and let them work back gradually to their own quarters later in the day.

Remove Tags and Trim Feet. Each bred ewe should be caught and examined soon after she goes into winter quarters. The large dirty tags around the dock and hindquarters of each ewe should be clipped off. Any wool that is obscuring vision around the eyes should be removed. Next trim back any long toes from the bottom of the feet with pruning shears so that each ewe can walk around with ease. Trim the feet after the sheep have been out on wet grass or ground for a few hours.

Preparing for the Lambing Season. It is fortunate for the ewe flock that lambing time comes before the busy rush of farming operations. Farm folks should not be rushed to time to properly look after the ewe flock as the spring lambing season gets under way. Here is where a good old-style barn with plenty of box stalls comes in mighty handy.

Bred ewes normally should gain 20 to 30 pounds during the five months prior to lambing time. They will normally lose about twice the weight of the new born lamb following lambing. Their weight should remain at about this level through the nursing period.

Lambing time is the one period of your sheep club project when you as a club member need to really be on the job. The manner in which you handle your ewes at this time may determine your success or failure in your ewe and lamb project. Inspect your ewe flock frequently and carefully every few hours. As soon as you notice a ewe becoming restless sunken ahead of the hips, and with rear flanks dropped down, put her in a separate pen bedded down with some clean straw. Sometimes trouble results from the use of small pens. The ewe is more likely to select a good lambing place if the pen is large. It is a good plan to place the ewe and lamb in a 4' x 4' pen or larger, soon after lambing. A pan of fresh, clean water is placed in one corner of the pen where she can reach it.

Ewes with the unborn lamb in normal position having both front legs forward with the lamb's head between them will usually lamb in two or three hours after showing signs of restlessness. Strong vigorous ewes that have been properly managed seldom have difficulty in giving birth to their lambs. Do not disturb a ewe during the first stage of labor. If she labors for a few hours, then an examination should be made to see if the lamb is in normal position.

If the ewe seems unable to lamb, assistance must be given. Wash the hands with hot water and soap, rinse thoroughly, then apply mineral oil or glycerol before endeavoring to assist the ewe to lamb. It may be that the lamb is not coming in the normal position and needs to be turned so that the front feet and the head are in proper position to come forward as the ewe strains. Gently pulling on the lamb's forelegs at the time the ewe strains may help to save the lamb. When the ewe stops straining, stop pulling, but hold what you



have gained. Ewes frequently give birth to lambs that come with one or both hind legs first. The safest thing to do in such circumstances is to get the assistance of your veterinarian, otherwise you stand a good chance of losing both the lamb and the ewe.

After birth of the lamb, proceed at once to remove the mucus from the mouth and nostrils of the new born lamb so it can breathe, and apply iodine to the navel cord to prevent infection. Place the new born lamb next to the mother ewe's head. She will soon lick the lamb clean and it should be trying to nurse within thirty minutes.

Check up on the ewe and lamb within an hour or less to see if it has nursed. If the lamb has not nursed by this time, strip a little milk from the ewe's teats to make sure that milk is available and see that the lamb gets it. Let the lamb nurse another ewe if possible, while waiting to see if the mother will milk. Most ewes will have milk soon after lambing.

Lambs that seem chilled should be rubbed dry and wrapped in a warm blanket or taken to the house until they get warm. Such lambs can then be brought back to the ewe and helped to get their first mother's milk.

In cases where the ewe does not own her lamb, milk out some of her milk and put it on her nose and also dampen the rump of her lamb with it. The ewe will smell the rump of the lamb as it tries to nurse. The smell of the lamb's rump being the same as that of the ewe will usually cause the ewe to claim it and let it nurse.

In brief, the most important pages in a shepherd's notebook are on what to do at lambing time, and would read about like this.

1. Reduce ewe's grain ration to 1/2 pound daily.
2. Arrange for clean, warm, dry quarters for lambing.
3. Check ewe flock every few hours at lambing time.
4. Place restless ewes in separate, clean, bedded pens.
5. See that new born lambs do not become chilled.
6. Check ewe's udder to see that she has milk for lamb.
7. See that new born lambs nurse soon after birth.
8. Provide fresh clean water and some leafy alfalfa hay.
9. Start graining ewe gradually two days after lambing.

A few ewes and lambs can be penned together as soon as the lambs are a week old and penned in still larger groups as soon as the lambs are ten days old. This plan will save much time and labor in caring for the ewes that have young lambs. Do not turn the ewes with young lambs back with the main sheep flock before the lambs are strong and active. Other sheep without lambs are likely to hunt and injure any young lambs that are not strong enough to get out of the way.

After ewes have been nursing their lambs for a week, increase their feed ration to meet the need for the increased milk flow as well as to help maintain their own body weight and to mature their fleeces which are to be shorn in a month or two. Get the young ewes and lambs out in a dry, sheltered area where they can take advantage of sunshine on bright, clear days. Sunshine is nature's best tonic for all young animals.

The Problem Orphan Lamb. Every member who has cared for a flock of ewes has experienced instances when the mother ewe refuses to own her lamb. Such ewes may have enough milk for a lamb and be just plain stubborn and refuse to fall for any one of the shepherd's stack of ruses to win her over to own her lamb.

Very young orphan lambs need some colostrum milk from a ewe that has just lambled. Ewe's milk is about twice as rich in fat as cow's milk, so do not try to feed separated cow's milk to lambs. Either ewe's milk or whole cow's milk can be used after the orphan lamb has received a couple ounces of colostrum milk. If milk from a ewe that has lambled recently cannot be given to the orphan lamb for the first two or three feedings, then add about 1/2 teaspoonful of castor oil to the second or third feeding of milk for the orphan.



Orphan lambs will soon learn to take milk from a sterilized bottle with a nipple placed over the bottleneck. The milk should be warmed to about 98 degrees F. or feel warm to the hand. Feed this warm milk at the rate of about an ounce every two hours for the first two days. Gradually increase from two to six ounces of milk every four hours for the next two weeks. Orphan lambs should have a chance to start nibbling away at some wheat bran or ground or rolled oats, later replaced by a mixture of cracked corn and whole oats. Increase the amount of milk to one pint every eight hours until lambs are well on their way on a good grain ration and do not need milk any longer.

Lamb Docking and castrating. Young lambs look a lot better docked, and sell for more money on the market than undocked lambs. Docking removes an important health hazard and lessens chances of sheep pest infestation.

The best time to dock and castrate young lambs is when they are seven to fourteen days old. Try to select a bright sunny day for this operation. Have the pen where the freshly docked and castrated lambs are to be put clean and bedded with bright straw. Separate all the buck lambs from the flock. Castrate first, and then dock the tails. Keep tools to be used in clean, luke warm water containing a good disinfectant. Keep your hands clean. Use a heavy pair of castrating shears, an all-in-one castrator, or a knife and pliers. It takes two persons to do this job correctly, one to hold the lamb properly and the other to complete the operation.

In castrating, cut off half of the lower end of the scrotum or bag. Now firmly grasp one testicle at a time between the thumb and forefinger of your right hand and pull the cord steadily until it breaks. Some operators follow with a disinfectant, but this is not necessary if your tools and hands are clean.

Dock the tails about one inch from the body measuring from the under side of the tail. With your fingers locate the joint about one inch from the lamb's body, push the skin of the tail toward the body, and dock the tail at the joint indicated. The skin on the base of the tail that was pushed towards the body of the lamb before the tail was docked will then come down over the cut and hasten the healing of the tail. A disinfectant should be applied to the fresh cut surface. Smear 62 or its substitute is used frequently on lambs that are docked late in the spring to keep flies away from the wound.

The ewe lambs are docked next and placed in the pen with the other lambs. Tails docked with a hot iron do not bleed, but are very slow to heal. Watch the lambs closely to check any infection that may occur.

Weaning the Lambs. When weaning time arrives, which is usually four to four and a half months, yard the ewes and lambs far enough apart so that they cannot see or hear each other. Proceed to feed the lambs which have been on grain feed the same as before. The ewes, however, should be put on a much reduced ration of whatever they were fed before the lambs were taken off. Check the ewe flock carefully to see if any ewes have developed caked udders and milk them out two or three times during the first week. Turning the lambs back with the ewes once after being separated is not recommended as gorging on milk after being off the ewes will tend to upset the lambs and cause some scouring.

It might be well to casually inspect the ewe flock for a week or ten days after the lambs have been taken off to care for some ewe that is an exceptionally heavy milker and that needs individual attention to save her udder from becoming spoiled. Access to good grass pasture will be the best place for the ewe flock for the remainder of the summer.

Shearing Time Arrives. Each spring during April and the first part of May, sheep shearing is in full swing, being done either by professional sheep shearers or by the flock owners themselves. Right here is where a 4-H club member can secure some interesting and valuable experience by trying to shear some of his own ewes. The job can be done by using hand shears or with a power outfit.



You have opened up the fleece on one of your ewes when you caught her for some other purpose, and you were surprised to see how clean the fleece was down inside, as well as the pink healthy condition of the skin. We never open a ewe's fleece on the back, as when once opened there, it would let dirt and chaff down in the fleece and tend to lower it's market value.

Be sure the wool is dry on your ewes to be sheared before you make preparation to start shearing them. Damp wool might mold when packed in wool sacks and reduce its market value. Pen up the ewes the day before you plan shearing them so their wool will be dry.

Tie each fleece with paper wool twine, place the fleece with the flesh, clean side down, on a clean canvas or board floor. Then turn each side of the fleece in toward the center. Next, turn the neck wool back to the shoulder. Now roll the fleece from the tail end forward and tie. This will leave the shoulder wool on the outside of the fleece. Use only enough twine to tie the fleece loosely, then put it with the tied fleeces to be packed in long wool sacks.

Market Grades of Wool. Classes of wool are based on the length of the fiber. Wool 2 1/2 inches and over in length is classed as combing wool. Wool less than 2 1/2 inches in length is usually classed as clothing wool and is less desirable than the longer staple wool. Worsted cloth is made only from combing wool.

Grades of wool are based on the fineness of the wool fibers. The U. S. Bureau of Standards call for seven different wool grades, namely: Fine, Half-blood, Three-eighths blood, Quarter-blood, Low-quarter-blood, Common, and Braid.

There is a wide variation in the grades of wool produced on sheep of the different breeds. The largest breeds tend to produce the coarsest grade of wool. For example, ewes from the Lincoln breed produce 12 to 16 pounds of common braid wool. Rambouillets have fleeces varying from fine to half-blood combing and clothing. Corriedales have fleeces averaging 10 to 18 pounds of half-blood to three-eighths-blood combing.

Shropshire fleeces vary from 9 to 10 pounds of three-eighths-blood and quarter-blood combing. Hampshire fleeces average 7 to 10 pounds of three-eighths-blood and quarter-blood combing. Some of the low wool producing mutton breeds include the Cheviot with 6 to 8 pounds of quarter-blood combing fleeces. Southdown fleeces average 5 to 7 pounds of three-eighths-blood combing and clothing while the Suffolks have fleeces varying from 5 to 7 pounds grading out as both three-eighths-blood combing and clothing wool. Individual ewes from each breed may have heavier fleeces.

Comparing Fleece Wool Samples. In normal price levels of both mutton and wool, the wool generally supplies about one-third of the total income from a sheep flock. The total income per ewe can be materially increased by giving more attention to the wool product. The quality of the fleece can be gradually improved by selecting only rams and ewes that possess the higher quality, more compact fleeces.

The quality of the fleece can be reduced in numerous ways: by using inferior wool rams, by poor feeding practices, by allowing the flock to graze on areas infested with burrs and types of stick weeds that attach to the wool, by sheep becoming sick and thus causing a weak spot to develop in all the wool fibers on the fleece, and by poor shearing, dirty shearing floor, and rolling and tying the fleece improperly.

A dense fleece is one that has a large number of wool fibers to each square inch of surface of the sheep's skin. Density is a desirable characteristic as it means weight of the clip, fineness of the fiber, and protection from the weather. The outer part of the fleece is tight, thus protecting the inner part of the fleece to keep it clean and bright, and free from chaff and dirt particles clear down to the pink skin of the sheep. The wool fiber of the medium wool sheep is crimped, while the long wool sheep breeds have wool that is wavy or falls into ringlets.



A pure type fleece is one that does not contain any off-colored wool fibers, kempy fibers, or dark wool, and will take dye. Wool fibers are classed as strong that do not have a weak place in the full length of the fiber. A sick or half starved sheep will develop a weak place soon after this situation occurs.

Fleece wools can be said to have character as one refers to the evenness and distinct crimp or waviness of the wool fibers. A fleece is said to have character when the crimp is of the same length for the full length of the wool fiber. This character of even crimping when associated with softness of touch gives elasticity to the wool fibers. For comparison, measure a few wool fibers lying loose on the table, then measure the same fibers under tension and note the increase in length due the character of the crimp.

You now have your wool all shorn, tied and packed in the long regulation wool sacks. You can either sell to a local wool buyer, or you can consign your wool by freight to the nearest Farmer's Cooperative wool marketing agency where it is later graded and a check mailed to the producer which represents an advance loan payment on the wool for each grade. This is determined in the same way, on the same market, Boston, as the local price of wool. The farmer-owned cooperative that covers the states of Nebraska, Kansas, Missouri, Oklahoma, Arkansas, and part of Texas is the Midwest Wool Marketing Cooperative, 915 Wyoming Street, Kansas City 7, Missouri. After your wool and all the other wool of the same grades as yours has been sold by your cooperative to the woolen mills, you will receive a grading sheet showing the number of pounds of wool of each grade you produced with the final selling price for each grade. The advance check sent you and the marketing charges are taken from the total sales to the mill. The difference is your final check. The total amount of money you get for your wool therefore will be the advance loan check plus the final settlement check. When you become a member, your wool is automatically insured for loss by fire from the time you shear at your place.

By selling your wool on a graded basis, you have a method of checking the quality of the wool from the flock. You have your grading sheets to compare from year to year to guide you in selection of any new breeding rams or ewes to be added to the flock at a later date.

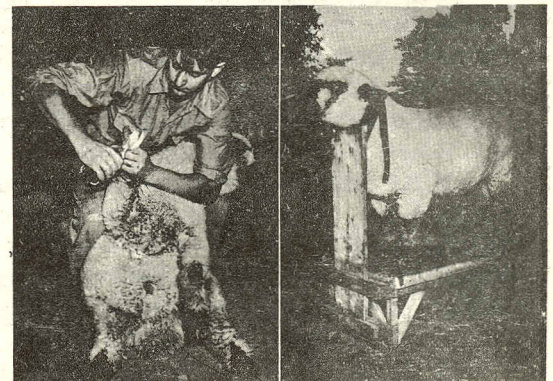
## Fitting and Showing

Planning for the county 4-H club lamb show is the final job that many members look forward to with considerable enthusiasm. It takes time to properly block, shape, and trim fat lambs in order to have them in the best presentable form. Most sheep club members like to have three market lambs, so they can show two of the lambs in the single fat lamb class and also for the pen of three fat lambs. Blocking and trimming fleeces on either fat lambs or breeding ewe lambs is one job that you should not rush into.

You need to plan each step carefully. It is a good idea to start fleece blocking and trimming operations six weeks before the lambs are to be shown. You can then come nearer shaping the fleece to make the lamb look the best by doing a little trimming every week.

Such a job started well in advance of the show date will not look like one of those all-at-once, over-night jobs.

Most club members take pride in presenting their lambs in the best possible form. Proper blocking and trimming of show lambs has now become quite an art, and many sheep club members have become very proficient at it. We conclude this discussion here by referring you to Extension Circular 0-23-2 on Fitting and Showing Meat Animals, which contains a discussion in more detail on the fitting and showing of sheep.



(Left) Trimming the lamb's feet with pruning shears. (Right) Sheep held by stanchion on blocking stand that is 4 feet long, 20 inches wide and 15 inches high.